

Appln No. 09/697,777

Amdt date November 15, 2004

Reply to Office action of September 3, 2004

REMARKS/ARGUMENTS

Claims 1-25 are pending. Claims 1 and 22 are amended.

The Examiner has not acknowledged receipt of the IDS that was filed on August 21, 2002. Applicants respectfully request acknowledgment of the IDS by initialing and returning the attached copy of the same IDS.

Claims 1-25 are rejected under 35 U.S.C. § 103 as being unpatentable over Romesburg, et al. (6,163,608) in view of Wu (6,125,179). Applicants submit that all of the pending claims in the application are patentable over the cited references, and reconsideration and allowance of this application are respectfully requested.

Amended independent claim 1 recites "estimating a first parameter of the signal in a remote location; receiving the first parameter from the remote location via a communication network; estimating a second parameter of the signal locally, the second parameter being different from the first parameter; and modifying a second signal to replicate the signal as a function of the estimated first and second parameters." Applicants respectfully submit that the cited references alone or in combination do not disclose or suggest the recited claim 1.

Romesburg describes a method and apparatus for modeling background noise and generating comfort noise in an echo suppression system. In the system of Romesburg a "switch 275 is used to selectively substitute the comfort noise 265 for the suppressor output 135 as the near-end audio signal 275 for the telephone. In other words, when the echo suppressor 130 is

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active and attenuating the noise component of the microphone signal 115, the comfort noise signal 265 is passed to the far-end user. Otherwise, the audio output 135 from the echo suppressor 130 is passed to the far-end user. In alternative configurations, the second switch 270 is replaced with a summing device, and a scaled version of the comfort noise 265 is added to the echo suppressor output 135 to provide comfort noise which compensates for the noise attenuation provided by the echo suppressor 130. In other words, as the echo suppressor 130 becomes more active and attenuates the background noise to a greater degree, the level of added comfort noise is increased, and vice versa." (Col. 7, line 66 to col. 8, line 13, underlining added).

There is no teaching or suggestion in Romesburg about "estimating a first parameter of the signal in a remote location; receiving the first parameter from the remote location via a communication network; estimating a second parameter of the signal locally, the second parameter being different from the first parameter; and modifying a second signal to replicate the signal as a function of the estimated first and second parameters." Rather, the noise modeling of Romesburg is performed within an echo suppression system by computing noise model parameters during periods of speech inactivity and freezing them during periods of speech activity. "Prevailing noise model parameters are then used to generate high quality comfort noise which is substituted for actual noise whenever the actual noise is muted or attenuated by an echo suppressor." (Col. 4, line 34-40, underlining added.).

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Similarly, Wu describes an Acoustic Echo Control (AEC) device operates to reduce acoustic echo feedback in a speakerphone. "An adaptive echo canceller responds to a far-end speech signal to generate an estimated echo which is subtracted from a near-end speech signal, to generate a compensated near-end speech signal." (See, Abstract.). "The far-end speech signal 110 is generated by module 112 which digitizes the signal received from the remote station 103 and cancels line echo if such echo exists. Module 114 digitizes the incoming signal from microphone 104 to generate the near-end speech signal 106. (Col. 3, line 7-10, underlining added.).

As a result, there is no teaching or suggestion in the combination of Romesburg and Wu of "estimating a first parameter of the signal in a remote location; receiving the first parameter from the remote location via a communication network; estimating a second parameter of the signal locally, the second parameter being different from the first parameter; and modifying a second signal to replicate the signal as a function of the estimated first and second parameters," as recited by the amended independent claim 1. Therefore, independent claim 1 is patentable over the cited references.

Independent claim 12 includes, among other limitations, "transmitting the first parameter and the signal from the far end to the near end; estimating a second parameter different from the first parameter of the far end background noise at the near end; and modifying a noise signal to replicate the far end background noise as a function of the estimated first and second parameters." As discussed above, there is no teaching or

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suggestion in the combination of Romesburg and Wu of "transmitting the first parameter and the signal from the far end to the near end," and "estimating a second parameter different from the first parameter of the far end background noise at the near end." Consequently, independent claim 12 is also patentable over the cited references.

Amended independent claim 22 recites a local receiver for "replicating a signal generated by a remote transmitter, the local receiver adapted to receive the signal and a first parameter of the signal from the remote transmitter, the local receiver, comprising: a signal estimator to estimate a second parameter of the signal different from the received first parameter; and a signal generator to modify a second signal to replicate the signal as a function of the first and estimated second parameters." As explained above, there is no teaching or suggestion in the combination of Romesburg and Wu of "a signal estimator to estimate a second parameter of the signal different from the received first parameter." Accordingly, independent claim 22 is also patentable over the cited references.

In short, the independent claims 1, 12, and 22 define a novel and unobvious invention over the cited references. The dependent claims 2-11, 13-21, and 23-25 are all dependent, directly or indirectly from independent claims 1, 12, and 22, respectively, and therefore include all the limitations of their base claims and additional limitations therein. Accordingly, these claims are also allowable for the same reason set forth hereinbefore as well as the additional limitations recited.

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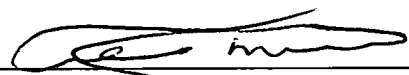
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In view of the foregoing amendments and remarks, it is respectfully submitted that this application is now in condition for allowance, and accordingly, reconsideration and allowance are respectfully requested.

Respectfully submitted,
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